

2.Q PLUGGING AND ABANDONMENT PLAN

Submit a plan for plugging and abandonment of the well including (1) describe the type, number, and placement (including the elevation of the top and bottom) of plugs to be used; (2) describe the type, grade, and quantity of cement to be used; and (3) describe the method to be used to place plugs, including the method used to place the well in a state of static equilibrium prior to placement of the plugs. Also, for a Class III well that underlies or is in an exempted aquifer, demonstrate adequate protection of USDWs. Submit this information on USEPA Form 7520-14, Plugging and Abandonment Plan.

RESPONSE

The following completed copies of US EPA Form 7520-14 and Plugging and Abandonment Plan, are submitted to satisfy this requirement. The modifications made to this form are to provide consistency with all available and current information. Costs based on recent third party estimates which are associated with the plugging and abandonment of the wells per the following procedures are presented in the completed plugging forms, Table Q-1, and in Response 2.R of this document.

The following is the proposed plan for plugging and abandonment of the proposed Powertech non-hazardous Dewey-Burdock Disposal Wells. Note that cement volume is based on the well with the largest casing capacity (DW No. 1) and would be less than stated herein for DW Nos. 2, 3, 4, and additional disposal wells. Plugging assumes filling casing with cement from top to bottom.

1. Install a test gauge on the annulus to perform a static pressure test. Ensure that the annulus is fluid filled and that the well has been shut-in for a minimum of 24 hours. Pressurize annulus to approximately 500 psig and isolate from the annulus system. Monitor annular pressure for one hour. The test will be successful if the pressure change is less than 10 percent of the starting pressure.
2. Prepare well and location for plugging. Remove wellhouse, well monitoring equipment and wellhead injection piping.
3. Move in and rig-up workover rig, mud pump, circulating pit and pipe racks as necessary. Flush well with approximately 100 bbl of brine.
4. Remove wellhead and release slips.
5. Release injection packer. Displace annular fluid from well into injection formation by flushing with approximately 100 bbl of brine.
6. Pull and lay down the injection tubing and packer.
7. Pump approximately 384 sacks (calculated for disposal well with largest casing capacity) of Class A cement with 4 percent bentonite (14.1 ppg, 1.55 cf/sx yield) into cased hole in 2 – 3 stages from the bottom up.
8. Cut off wellhead approximately 3' BGL and weld cap with permanent marker on casing.
9. Rig down and move out pulling unit and equipment.
10. Submit required plugging records to USEPA and SD DENR

Post-Closure Care Requirements

Powertech will provide notification of closure for the Class V wells to USEPA, Region 8, the SD DENR and the local zoning authorities. Included with the notification will be information regarding the nature of the historic injected waste stream, identification of the depths of the injection and confining zones, well schematics and plugging records. Powertech will retain, for a period of three years following the Class V well closure, records reflecting the nature, composition and volume of all injected fluids. Upon request of the director of USEPA, Region 8, Powertech will then deliver the records to the director at the conclusion of the retention period, or dispose of such records.

FORM 7520-14

PROPOSED WELL PLUGGING AND ABANDONMENT



United States Environmental Protection Agency
Washington, DC 20460

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility Dewey-Burdock Disposal Well No. 1 (DW No. 1) 310 2nd Avenue, Edgemont, SD, 57735	Name and Address of Owner/Operator Powertech (USA), Inc. 5575 DTC Parkway, Suite 140, Greenwood Village, CO, 80111
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Locate Well and Outline Unit on Section Plat - 640 Acres 	<table border="1" style="width:100%"> <tr> <td>State South Dakota</td> <td>County Fall River</td> <td>Permit Number TBD</td> </tr> <tr> <td colspan="3">Surface Location Description <input type="checkbox"/> 1/4 of <input type="checkbox"/> ne <input type="checkbox"/> 1/4 of <input type="checkbox"/> nw <input type="checkbox"/> 1/4 of <input type="checkbox"/> sw <input type="checkbox"/> 1/4 of Section <input type="checkbox"/> 2 Township <input type="checkbox"/> 7S Range <input type="checkbox"/> 1E </td> </tr> <tr> <td colspan="3">Locate well in two directions from nearest lines of quarter section and drilling unit</td> </tr> <tr> <td colspan="3">Surface Location <input type="checkbox"/> 845 ft. frm (N/S) <input type="checkbox"/> S Line of quarter section and <input type="checkbox"/> 998 ft. from (E/W) <input type="checkbox"/> W Line of quarter section.</td> </tr> <tr> <td colspan="2"> TYPE OF AUTHORIZATION <input type="checkbox"/> Individual Permit <input checked="" type="checkbox"/> Area Permit <input type="checkbox"/> Rule Number of Wells <input type="checkbox"/> 4-8 </td> <td> WELL ACTIVITY <input type="checkbox"/> CLASS I <input type="checkbox"/> CLASS II <input type="checkbox"/> Brine Disposal <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage <input type="checkbox"/> CLASS III </td> </tr> <tr> <td colspan="2">Lease Name Dewey-Burdock</td> <td>Well Number TBD</td> </tr> </table>	State South Dakota	County Fall River	Permit Number TBD	Surface Location Description <input type="checkbox"/> 1/4 of <input type="checkbox"/> ne <input type="checkbox"/> 1/4 of <input type="checkbox"/> nw <input type="checkbox"/> 1/4 of <input type="checkbox"/> sw <input type="checkbox"/> 1/4 of Section <input type="checkbox"/> 2 Township <input type="checkbox"/> 7S Range <input type="checkbox"/> 1E			Locate well in two directions from nearest lines of quarter section and drilling unit			Surface Location <input type="checkbox"/> 845 ft. frm (N/S) <input type="checkbox"/> S Line of quarter section and <input type="checkbox"/> 998 ft. from (E/W) <input type="checkbox"/> W Line of quarter section.			TYPE OF AUTHORIZATION <input type="checkbox"/> Individual Permit <input checked="" type="checkbox"/> Area Permit <input type="checkbox"/> Rule Number of Wells <input type="checkbox"/> 4-8		WELL ACTIVITY <input type="checkbox"/> CLASS I <input type="checkbox"/> CLASS II <input type="checkbox"/> Brine Disposal <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage <input type="checkbox"/> CLASS III	Lease Name Dewey-Burdock		Well Number TBD
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Lease Name Dewey-Burdock		Well Number TBD																	

CASING AND TUBING RECORD AFTER PLUGGING					METHOD OF EMPLACEMENT OF CEMENT PLUGS	
SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE	<input type="checkbox"/> The Balance Method <input type="checkbox"/> The Dump Bailer Method <input type="checkbox"/> The Two-Plug Method <input checked="" type="checkbox"/> Other	
7	26	2765	2765	6.276		

CEMENTING TO PLUG AND ABANDON DATA:							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inche)	6.276						
Depth to Bottom of Tubing or Drill Pipe (ft)	2765						
Sacks of Cement To Be Used (each plug)	383						
Slurry Volume To Be Pumped (cu. ft.)	594						
Calculated Top of Plug (ft.)	0						
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	14.1						
Type Cement or Other Material (Class III)	Class A						

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)			
From	To	From	To
Perforated Interval: 1615'	2205'		

Estimated Cost to Plug Wells
\$100,000

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print) Richard Blubaugh, Vice President - Environmental	Signature _____	Date Signed _____
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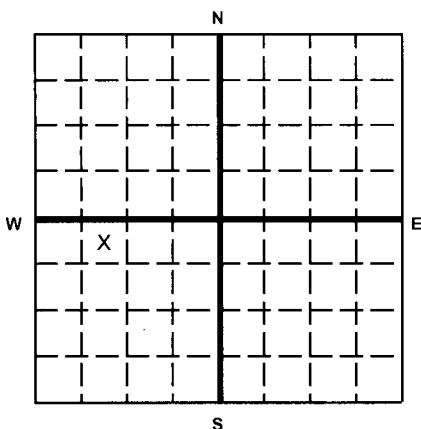


United States Environmental Protection Agency
Washington, DC 20460

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility Dewey-Burdock Disposal Well No. 2 (DW No. 2) 310 2nd Avenue, Edgemont, SD, 57735	Name and Address of Owner/Operator Powertech (USA), Inc. 5575 DTC Parkway, Suite 140, Greenwood Village, CO, 80111
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Locate Well and Outline Unit on Section Plat - 640 Acres



State South Dakota	County Fall River	Permit Number TBD
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Surface Location Description
 1/4 of ne 1/4 of nw 1/4 of sw 1/4 of Section Township Range

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location
 Location ft. frm (N/S) Line of quarter section
 and ft. from (E/W) Line of quarter section.

TYPE OF AUTHORIZATION <input type="checkbox"/> Individual Permit <input checked="" type="checkbox"/> Area Permit <input type="checkbox"/> Rule Number of Wells <input type="text" value="4-8"/> Lease Name <input type="text" value="Dewey-Burdock"/>	WELL ACTIVITY <input type="checkbox"/> CLASS I <input type="checkbox"/> CLASS II <input type="checkbox"/> Brine Disposal <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage <input type="checkbox"/> CLASS III Well Number <input type="text" value="TBD"/>
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CASING AND TUBING RECORD AFTER PLUGGING				
SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
5.5	17	3195	3195	4.892

METHOD OF EMPLACEMENT OF CEMENT PLUGS

The Balance Method
 The Dump Bailer Method
 The Two-Plug Method
 Other

CEMENTING TO PLUG AND ABANDON DATA:							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inche)	4.892						
Depth to Bottom of Tubing or Drill Pipe (ft)	3195						
Sacks of Cement To Be Used (each plug)	270						
Slurry Volume To Be Pumped (cu. ft.)	418						
Calculated Top of Plug (ft.)	0						
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	14.1						
Type Cement or Other Material (Class III)	Class A						

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)			
From	To	From	To
Perforated Interval: 3100'	3195'		

Estimated Cost to Plug Wells
 \$100,000

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print) Richard Blubaugh, Vice President - Environmental	Signature _____	Date Signed _____
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United States Environmental Protection Agency
Washington, DC 20460

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility Dewey-Burdock Disposal Well No. 3 (DW No. 3) 310 2nd Avenue, Edgemont, SD, 57735	Name and Address of Owner/Operator Powertech (USA), Inc. 5575 DTC Parkway, Suite 140, Greenwood Village, CO, 80111
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Locate Well and Outline Unit on Section Plat - 640 Acres 	State South Dakota	County Custer	Permit Number TBD
	Surface Location Description 1/4 of <input type="checkbox"/> se 1/4 of <input type="checkbox"/> nw 1/4 of <input type="checkbox"/> sw 1/4 of Section <input type="text" value="29"/> Township <input type="text" value="6S"/> Range <input type="text" value="1E"/>		
	Locate well in two directions from nearest lines of quarter section and drilling unit Surface Location Location <input type="text" value="430"/> ft. frm (N/S) <input type="text" value="S"/> Line of quarter section and <input type="text" value="1021"/> ft. from (E/W) <input type="text" value="W"/> Line of quarter section.		
	TYPE OF AUTHORIZATION <input type="checkbox"/> Individual Permit <input checked="" type="checkbox"/> Area Permit <input type="checkbox"/> Rule Number of Wells <input type="text" value="4-8"/>		WELL ACTIVITY <input type="checkbox"/> CLASS I <input type="checkbox"/> CLASS II <input type="checkbox"/> Brine Disposal <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage <input type="checkbox"/> CLASS III
Lease Name <input type="text" value="Dewey-Burdock"/>		Well Number <input type="text" value="TBD"/>	

CASING AND TUBING RECORD AFTER PLUGGING					METHOD OF EMPLACEMENT OF CEMENT PLUGS	
SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE		
5.5	17	2740	2740	4.892	<input type="checkbox"/> The Balance Method <input type="checkbox"/> The Dump Bailer Method <input type="checkbox"/> The Two-Plug Method <input checked="" type="checkbox"/> Other	

CEMENTING TO PLUG AND ABANDON DATA:							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inche)	4.892						
Depth to Bottom of Tubing or Drill Pipe (ft)	2740						
Sacks of Cement To Be Used (each plug)	231						
Slurry Volume To Be Pumped (cu. ft.)	358						
Calculated Top of Plug (ft.)	0						
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	14.1						
Type Cement or Other Material (Class III)	Class A						

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)			
From	To	From	To
Perforated Interval: 3100'	3195'		

Estimated Cost to Plug Wells
 \$100,000

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print) Richard Blubaugh, Vice President - Environmental	Signature 	Date Signed
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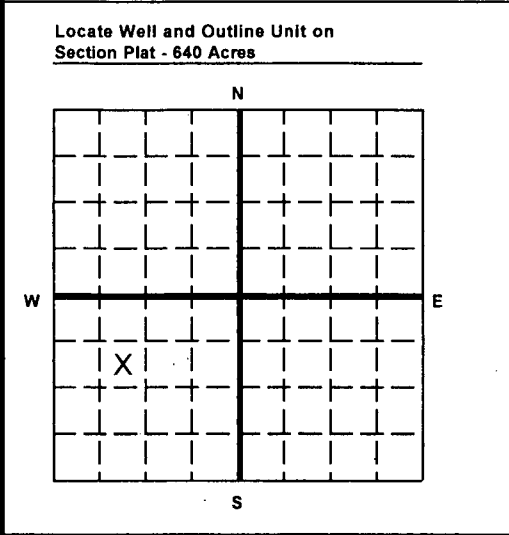


United States Environmental Protection Agency
Washington, DC 20460

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility
Dewey-Burdock Disposal Well No. 4 (DW No. 4)
310 2nd Avenue, Edgemont, SD, 57735

Name and Address of Owner/Operator
Powertech (USA), Inc.
5575 DTC Parkway, Suite 140, Greenwood Village, CO, 80111



State: South Dakota County: Custer Permit Number: TBD

Surface Location Description
1/4 of SE 1/4 of NW 1/4 of SW 1/4 of Section 29 Township 6S Range 1E

Locate well in two directions from nearest lines of quarter section and drilling unit
Surface Location 395 ft. frm (N/S) S Line of quarter section and 1057 ft. from (E/W) W Line of quarter section.

TYPE OF AUTHORIZATION
 Individual Permit
 Area Permit
 Rule
 Number of Wells: 4-8
 Lease Name: Dewey-Burdock

WELL ACTIVITY
 CLASS I
 CLASS II
 Brine Disposal
 Enhanced Recovery
 Hydrocarbon Storage
 CLASS III
 Well Number: TBD

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
5.5	17	3530	3530	4.892

METHOD OF EMPLACEMENT OF CEMENT PLUGS

The Balance Method
 The Dump Baller Method
 The Two-Plug Method
 Other

CEMENTING TO PLUG AND ABANDON DATA:

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	4.892						
Depth to Bottom of Tubing or Drill Pipe (ft)	3530						
Sacks of Cement To Be Used (each plug)	297						
Slurry Volume To Be Pumped (cu. ft.)	461						
Calculated Top of Plug (ft.)	0						
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	14.1						
Type Cement or Other Material (Class III)	Class A						

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To
Perforated Interval: 3435'	3530'		

Estimated Cost to Plug Wells
\$100,000

Certification
I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print): Richard Blubaugh, Vice President - Environmental
 Signature: _____
 Date Signed: _____

TABLE Q-1 Estimated Plugging Cost for Dewey-Burdock Disposal Wells

FIELD OPERATIONS	Unit Cost	Units Req'd.	Total Cost
<i>Subcontractors - Direct bill to Powertech</i>			
Mob/demob & Location Preparation	\$6,000	1	\$6,000
Workover Rig and Associated Equipment (days)	\$5,000	4	\$20,000
Rental Tools (days)	\$2,500	4	\$10,000
Rental Tubing Inspection	\$6,000	1	\$6,000
Falloff Test	\$6,500	1	\$6,500
RAT Log	\$4,500	1	\$4,500
Trucking	\$4,000	1	\$4,000
Contract Labor	\$2,000	2	\$4,000
Cement (384 sx), pumping & equipment	\$9,600	1	\$9,600
Contingency	\$8,000	1	\$8,000
<i>Total Estimated Subcontractor Charges</i>			\$78,600
Test Design and Project Management (hours)	\$115	24	\$2,760
Supervision (days)	\$850	5	\$4,250
Travel (hours)	\$115	8	\$920
Field Truck and Fuel (days)	\$150	6	\$900
Per Diem (days)	\$100	6	\$600
Data Analysis (lump sum)	\$2,000	1	\$2,000
Report Preparation (hours)	\$115	24	\$2,760
<i>Total Estimated Petrotek Charges</i>			\$14,190
TOTAL ESTIMATED COST PER WELL			\$92,790
TOTAL ESTIMATED COST FOR FOUR WELLS			\$371,160
<i>Assumptions:</i>			
P&A costs are for well with largest casing capacity (DW No. 1); other P&A costs would be lower			
Subcontractors will bill Powertech directly - otherwise a 12.5% markup will apply.			
Field activities can be completed in 5 days; otherwise T&M rates will apply.			
Falloff test is required if > 6 months since last test; RAT log required if > 2 years since last log.			
The well is cemented from bottom to top in 2 - 3 stages.			
Powertech will be responsible for disposal of all well equipment.			

R

2.R NECESSARY RESOURCES

Submit evidence such as a surety bond or financial statement to verify that the resources necessary to close, plug, or abandon the well is available.

RESPONSE

Powertech will provide a surety instrument equal to the estimated cost for plugging and abandonment of the proposed disposal wells as a condition prior to the commencement of construction. A detailed plugging and abandonment estimate is presented as Table Q-1. The annual updates of Powertech's financial surety estimate will be reviewed and approved by both the USEPA and the U.S. Nuclear Regulatory Commission once a license is issued.

With respect to continued demonstration of financial assurance, the surety instrument will be maintained as required by applicable regulations. Within ninety (90) days after the close of each fiscal year, the permittee will obtain verification that the amount used for financial assurance is sufficient to address updated plugging and abandonment costs and will submit updated financial assurance information if the cost of plugging and abandonment has exceeded the existing financial assurance. In such an event, the information submitted to the Director will consist of a letter from the permittee regarding the change in the financial assurance requirements, verification from the appropriate financial institution regarding the increased financial assurance and a copy of the independent geologist or engineering estimate of the updated plugging and abandonment costs.